

WHAT IS CLAIMED IS:

- Sub
a1
1. An image quality analysis system for an image output device, comprising:
a test pattern pertinent to image quality determination;
a scanner that scans a hardcopy test image, which has been generated
5 by the output device based on the test pattern, to form a digital raster image; and
an image quality analysis module that receives the digital raster image,
distinguishes one or more test targets from the digital raster image, and performs
image quality analysis on the test targets to obtain results quantifying image quality.
 2. The image quality analysis system of claim 1, wherein the image quality
10 analysis is performed based on human visual system models.
 3. The image quality analysis system of claim 1, wherein the image quality
analysis module resides locally at a site of the image output device.
 4. The image quality analysis system of claim 3, wherein the image output device
is a copier that contains the scanner.
 - 15 5. The image quality analysis system of claim 1, wherein the scanner and the
image quality analysis module reside remote from the image output device.
 6. The image quality analysis system of claim 1, wherein the test pattern is stored
in memory at the image output device.
 7. The image quality analysis system of claim 1, wherein the image output device
20 is a copier having an input scanner section serving as the scanner and an output printer
section, and the test pattern is in the form of a hardcopy printout that is subsequently
scanned into the input scanner section and output as the hardcopy test image.
 8. The image quality analysis system of claim 1, further comprising a
communication module that connects the image quality analysis module to a remote
25 facility.
 9. The image quality analysis system of claim 8, wherein the results of the image
quality analysis are forwarded to the remote facility through the communication
module.
 10. The image quality analysis system of claim 9, wherein the remote facility
30 includes a diagnostic module that returns information pertinent to correcting any
undesirable image quality test results.

09450185-112999

11. The image quality analysis system of claim 1, wherein the image quality results are independent of the particular image output device or scanner used, such that comparisons of results can be made between differing image output devices.

12. A method of performing image quality analysis on an image output device having an output station that generates a hardcopy image from a digital image, the method comprising:

generating a hardcopy image output from the image output device based on a predetermined test pattern;

scanning the hardcopy image using a scanner to form a digital raster image;

identifying test targets within the digital raster image using pattern recognition software; and

performing image quality analysis on the test targets.

13. The method of claim 12, wherein the image quality analysis is based on human visual system (HVS) models and the image quality analysis provides results indicative of image quality that reflect human perceptions of image quality.

14. The method of claim 12, further comprising a step of sending a communication to a service facility.

15. The method of claim 14, wherein the communication is a service call if the image quality results are less than desirable.

16. The method of claim 14, wherein the communication is the transfer of the image quality results to the service facility.

17. The method of claim 16, further comprising the steps of analyzing the results along with predetermined image output device operating parameters and communicating information to the image output device relevant to correcting the undesirable image quality.

18. The method of claim 12, wherein the image output device is a copier that contains the scanner.

19. The method of claim 12, wherein the method is automatically initiated by the copier at a predetermined time.

20. The method of claim 12, wherein the steps of scanning and analyzing are performed remote from the image output device.

09450185-112999

Add #1